Before The
POSTAL REGULATORY COMMISSION
WASHINGTON, D.C. 20268-0001

RATE ADJUSTMENT DUE TO EXTRAORDINARY OR EXCEPTIONAL CIRCUMSTANCES	Docket No. R2013-11

RESPONSES OF THE UNITED STATES POSTAL SERVICE TO QUESTIONS 1-27 OF PRESIDING OFFICER'S INFORMATION REQUEST NO. 6
(November 13, 2013)

The United States Postal Service hereby provides its responses to

Questions 1-27 of Presiding Officer's Information Request No. 6, dated

November 6, 2013. Answers were sought no later than today. Each question is

stated verbatim and is followed by the response. The responses to Questions 1,

3-14, 17-22, and 24-25 are sponsored by Thomas Thress; the responses to

Questions 2 and 15 are sponsored by Stephen Nickerson; the responses to

Questions 16 and 23 are institutional responses of the Postal Service; and the

responses to Questions 26-27 are sponsored by Altaf Taufique.

Respectfully submitted,

UNITED STATES POSTAL SERVICE

By its attorneys:

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November 13, 2013

RESPONSE OF THOMAS THRESS
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1. In Order No. 864, the Commission stated "When quantifying the net adverse financial impact of non-exigent circumstances *[sic]*, the Postal Service must factor out the financial impact of non-exigent circumstances, such as the continuing effects of electronic diversion." Order No. 864 at 48.

   a. Please identify and describe the "non-exigent circumstances" identified by the Postal Service in its filings.

   b. Please explain how each of those non-exigent circumstances was "factored out."

   RESPONSE

   a. – b. The factors which have affected mail volumes since FY 2002 are isolated and quantified in Table Two of my Further Statement in this case and, in still more detail, on sheet 'Volume' of the spreadsheet, ExigentImpact.xlsx, which was filed with USPS-R2010-4R-10 in this case. The factors affecting mail volume are divided among the following columns of sheet 'Volume' of ExigentImpact.xlsx. The factors which are treated as "exigent circumstances" in this case are **bolded**.

Column C	Population	The dependent variable in the Postal Service's econometric demand equations is mail volume per adult. All other things being equal, mail volume is projected to grow with population.
Column D	**Employment**	**Total private employment; data are decomposed into Trend and Cyclical components for some mail categories.**
Column E	**Retail Sales**	**Real total retail sales and mail-order retail sales are included separately in several of the Postal Service's econometric demand equations.**
Column F	**Investment**	**Gross private domestic investment; data are decomposed into Trend and Cyclical components for some mail categories.**
Column G	**Foreign Trade**	**Real exports are included in the First-Class International Mail equation.**
Column H	Trends	This column presents the impact of full-sample time trends within the Postal Service's econometric demand equations.
Column I	Impact of Price Elasticity	This column presents the impact of nominal changes to Postal rates as measured by the Postal Service's estimated own-price elasticities.
Column J	Inflation	This column presents the impact of changes to the Consumer Price Index as measured by the impact of changes to real Postal prices in the absence of nominal rate changes.
Column K	Shares	This column presents the impact of shifts between worksharaing categories within First-Class workshared and Standard Mail.
Column L	Interventions	This column presents the impact of all variables which are calculated using Intervention Analysis. The impacts in this column are divided across columns U through Y based on the precise timing and nature of these Intervention variables.
Column M	Dummy Variables, Rate Change	This column presents the impact of econometric dummy variables which coincide with rate or rule changes within mail categories.

| Column N	Dummy Variables, Quarterly	This column presents the impact of econometric dummy variables which are equal to one in a specific quarter, and zero otherwise.
Column O	Dummy Variables, Continuous	This column presents the impact of econometric dummy variables which are equal to zero prior to a given date and are equal to one from that date forward.
Column P	Elections	This column presents the impact of econometric dummy variables which are tied to the timing of Federal elections.
Column Q	Seasonality	This column presents the impact of the seasonal variables included in the Postal Service's econometric equations.
Column R	Other	This column presents changes in mail volumes that are not explained by any of the variables included in the Postal Service's econometric demand equations.
Column U	Intervention Decomp, Diversion	This variable presents the impact of Intervention variables which take the form of linear trends which start prior to the onset of the Great Recession. The sum of columns U through Y is equal to column L by construction.
Column V	**Intervention Decomp, Recession**	**This variable presents the impact of Intervention variables which begin coincident with the onset of the Great Recession and which attenuate to a constant long-run level. The sum of columns U through Y is equal to column L by construction.**
Column W	**Intervention Decomp, Recession / Diversion**	**This variable presents the impact of Intervention variables which take the form of linear trends which start coincident with the onset of the Great Recession. The sum of columns U through Y is equal to column L by construction.**
Column X	Intervention Decomp, Rate Case	This variable presents the impact of Intervention variables which begin coincident with changes to Postal rates or regulations. The sum of columns U through Y is equal to column L by construction.
Column Y	Intervention Decomp, Other / Unknown	This variable presents the impact of Intervention variables which attenuate to a constant long-run level and whose starting period does not coincide with any known event. The sum of columns U through Y is equal to column L by construction.
Column AA	**Total Macro**	**This is the total negative impact of factors attributed to the Great Recession. Column AA is equal to the sum of columns D through G (so long as the numbers in those columns are negative) plus columns V and W.**

The separate effects of these individual factors are isolated using econometric analysis of the factors which affect the demand for mail volume by mail category. The econometric techniques used in this case have been described in past Postal Regulatory proceedings, including, for example, R2006-1, and are described in some detail in the annual filings with the Postal Regulatory Commission which were made on January 22 and July 1 of this year.

Please see my response to POIR No. 3, Question 2 for a detailed analysis of each of the factors which were considered as possibly having been attributable to the Great Recession.

The decomposition of the Great Recession, "the continuing effects of electronic diversion", and other factors on mail volumes from FY 2008 through FY 2012 is presented graphically over

the following pages for First-Class single-piece letters, cards, and flats; First-Class workshared letters, cards, and flats; total First-Class Mail; total Standard Mail; and total Market-Dominant mail.

First-Class Single-Piece Letters, Cards, & Flats
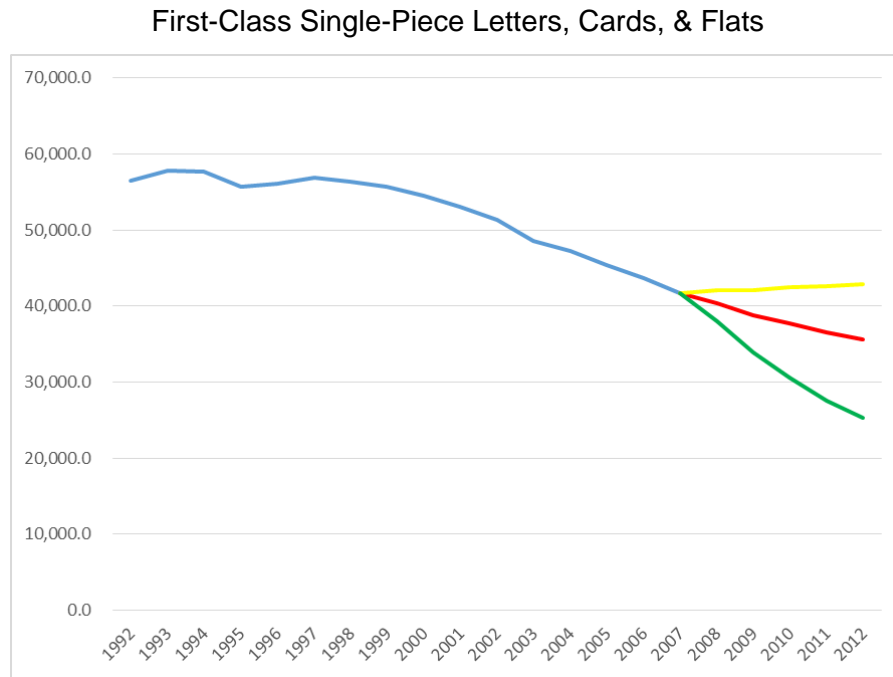
The blue line in the graph above is actual mail volume for First-Class single-piece letters, cards, and flats, from FY 1992 through FY 2007.

The green line in the graph shows actual mail volume from FY 2008 through FY 2012.
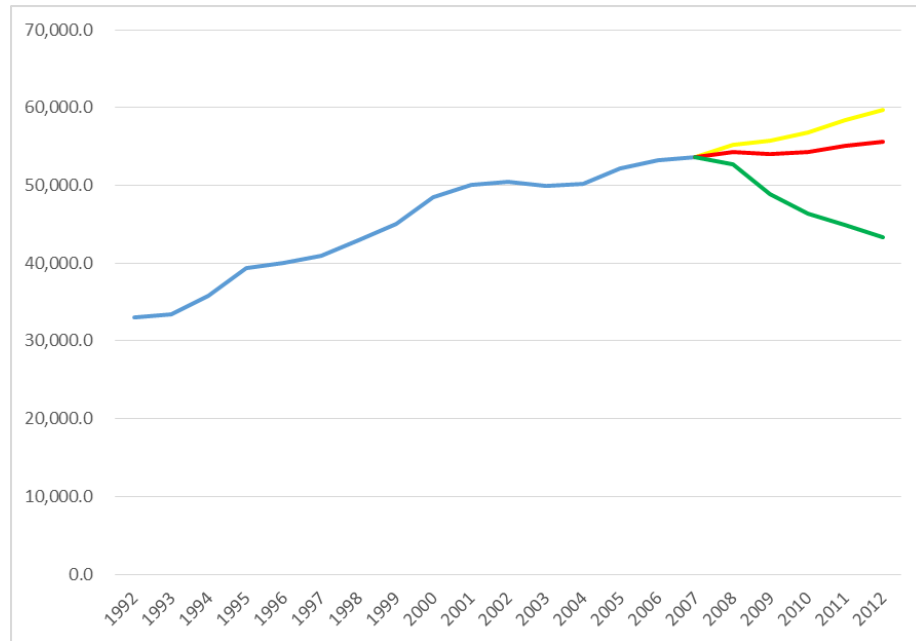
The red (middle) line in the graph removes the mail volume loss attributable to the Great Recession that was identified in my Further Statement in this case. The combined blue and red lines, hence, represent my best estimate of the path which First-Class single-piece letters, cards, and flats volume would have taken from FY 1992 through FY 2012 in the absence of the Great Recession.

The yellow (top) line in the graph removes the net mail diversion trends which I have identified as having been in effect since before the onset of the Great Recession. The gap between the yellow and red lines in the above graph represent "the continuing effects of electronic diversion" which have been factored <u>out</u> of my estimate of the impact of the Great Recession on First-Class single-piece letters, cards, and flats mail volume.

Similar graphs are shown below for First-Class workshared letters, cards, and flats mail; total First-Class Mail; total Standard Mail; and total Market-Dominant Mail.

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First-Class Workshared Letters, Cards, & Flats

   The blue line in the graph above is actual mail volume for First-Class workshared letters, cards, and flats, from FY 1992 through FY 2007.
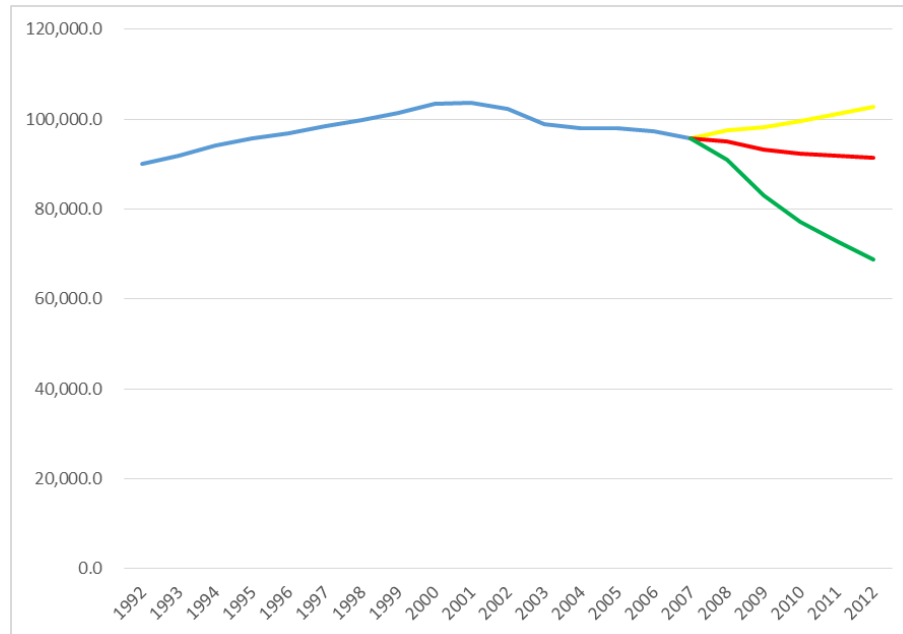
   The green line in the graph shows actual mail volume from FY 2008 through FY 2012.

   The red line in the graph removes the mail volume loss attributable to the Great Recession that was identified in my Further Statement in this case. The combined blue and red lines, hence, represent my best estimate of the path which First-Class workshared letters, cards, and flats volume would have taken from FY 1992 through FY 2012 in the absence of the Great Recession.

   The yellow line in the graph removes the net mail diversion trends which I have identified as having been in effect since before the onset of the Great Recession. The gap between the yellow and red lines in the above graph represent "the continuing effects of electronic diversion" which have been factored out of my estimate of the impact of the Great Recession on First-Class workshared letters, cards, and flats mail volume.

First-Class Mail (excluding Parcels)

The blue line in the graph above is actual mail volume for First-Class Mail from FY 1992 through FY 2007.

The green line in the graph shows actual mail volume from FY 2008 through FY 2012.
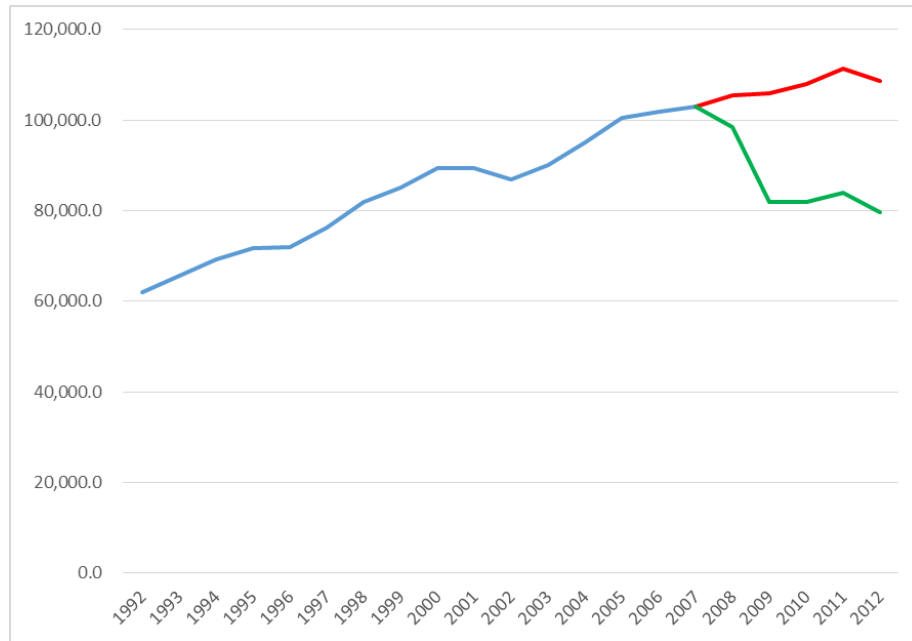
The red line in the graph removes the mail volume loss attributable to the Great Recession that was identified in my Further Statement in this case. The combined blue and red lines, hence, represent my best estimate of the path which First-Class Mail volume would have taken from FY 1992 through FY 2012 in the absence of the Great Recession.

First-Class Mail volume declined at an average annual rate of 0.8 percent from FY 2004 through FY 2007. In the absence of the Great Recession (as reflected by the red line), First-Class Mail volume would have been expected to continue to decline, at an average annual rate of 0.9 percent from FY 2007 through FY 2012.

The yellow line in the graph removes the net mail diversion trends which I have identified as having been in effect since before the onset of the Great Recession. The gap between the yellow and red lines in the above graph represent "the continuing effects of electronic diversion" which have been factored <u>out</u> of my estimate of the impact of the Great Recession on First-Class Mail volume.

Standard Mail (excluding Lightweight Parcel Select)

The blue line in the graph above is actual mail volume for Standard Mail from FY 1992 through FY 2007.

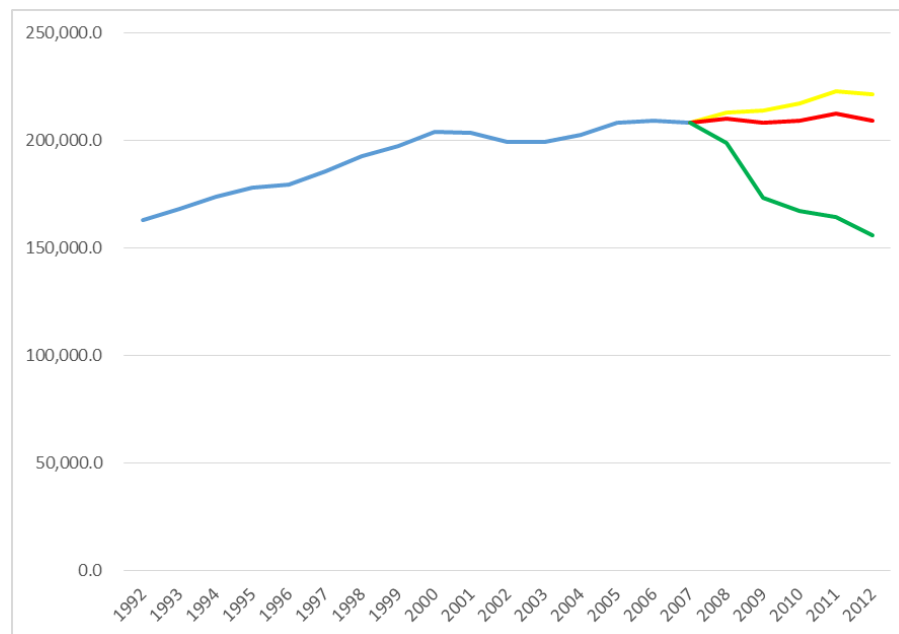The green line in the graph shows actual mail volume from FY 2008 through FY 2012.

The red (top) line in the graph removes the mail volume loss attributable to the Great Recession that was identified in my Further Statement in this case. The combined blue and red lines, hence, represent my best estimate of the path which Standard Mail volume would have taken from FY 1992 through FY 2012 in the absence of the Great Recession.

Note that the downturn in Standard Mail volume in FY 2012 is not attributed to the Great Recession so that this downturn in Standard Mail volume remains in the red line representing my best estimate of the path which Standard Mail volume would have taken in the absence of the Great Recession.

The Standard Mail demand equations do not include any net mail diversion trends. Hence, there is no yellow line shown on this graph.

Total Market Dominant Mail

Note: Volume here excludes First-Class Parcels, Parcel Post, Lightweight Parcel Select, and Free Mail.

The blue line in the graph above is actual mail volume for Market-Dominant Mail from FY 1992 through FY 2007.

The green line in the graph shows actual mail volume from FY 2008 through FY 2012.

The red line in the graph removes the mail volume loss attributable to the Great Recession that was identified in my Further Statement in this case. The combined blue and red lines, hence, represent my best estimate of the path which Market-Dominant mail volume would have taken from FY 1992 through FY 2012 in the absence of the Great Recession.

Market-Dominant Mail volume grew at an average annual rate of 0.9 percent from FY 2002 through FY 2007. In the absence of the Great Recession, Market-Dominant Mail volume would have been expected to grow at an average annual rate of 0.1 percent from FY 2007 through FY 2012. This still would have been the lowest growth rate for mail volume over any five-year period since at least 1947.

The yellow line in the graph removes the net mail diversion trends which I have identified as having been in effect since before the onset of the Great Recession. The gap between the yellow and red lines in the above graph represent "the continuing effects of electronic diversion" which have been factored out of my estimate of the impact of the Great Recession on mail volume.

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3. On page 16 of witness Nickerson's Statement, he states: "Historical and forecasted exogenous economic data were obtained from Global Insight's July 2013 baseline forecast. Historical and forecasted data for other exogenous variables… were obtained from RCF."

      a. Please identify and describe the historical and forecasted exogenous economic data obtained from Global Insight and used by the Postal Service in the current docket.

      b. Please identify and describe each "other exogenous variables" obtained from RCF and used by the Postal Service in the current docket.

<u>RESPONSE</u>

a. The following date series were obtained from IHS Global Insight for use in this case.

- Total U.S. population (including armed forces overseas), age 22 and over
- Consumer Price Index, all urban consumers, non-seasonally adjusted
- Real Retail Sales, including food services (note: Global Insight's forecast is of nominal Retail Sales, which are deflated by CPI for use in forecasting here.)
- Retail Sales, electronic shopping and mail-order houses, seasonally adjusted (note: This series is not forecasted by Global Insight; the forecast for this series is made by RCF as a function of Global Insight's forecast of total retail sales)
- Total Private Employment (note: The forecast of Employment used by the Postal Service is based on Global Insight's forecast of non-farm payrolls)
- Real gross private domestic investment
- Real exports of goods and services

b. In some cases, macro-economic data are decomposed into separate Trend and Cyclical components using a Hodrick-Prescott filter; this decomposition is performed by RCF on the data described in part a. of this question.

The price variables used in the Postal Service's econometric demand equations and volume forecasting models were constructed by RCF using historical price and billing determinant data from the Postal Service. Price variables associated with Postal competitors were constructed by RCF using average revenue per-piece figures for UPS and FedEx available from financial information available on these two companies' websites.

Seasonal and trend variables used in the econometric demand equations and volume forecasting models in this case were constructed by RCF. Intervention variables are calculated dynamically within the econometric models used in this case.

4. On page 5 of the Further Statement of Thomas E. Thress on Behalf of the United States Postal Service, September 26, 2013 (witness Thress's Statement), he states: "The impact of the Great Recession on mail volumes is the sum of the impact of those factors which are judged to be attributable to the Great Recession. This includes macro-economic variables, such as Employment, Investment, and Retail Sales, as well as other factors which began to affect mail volumes over the time period associated with the Great Recession."

    a. Please identify and describe each "factor[]" which the Postal Service "judged" to be attributable to the "Great Recession." Please include in your descriptions both the macro-economic factors (except Employment, Investment and Retail Sales) as well as "other factors."

    b. Please confirm that each of the above mentioned factors might affect mail volume independently of the Great Recession.

    c. If part b. is confirmed, please explain how your model differentiates the effects caused by the factors attributable to the Great Recession from those that are caused by the same factors, but could have occurred anyway due to other reasons. Please provide such explanation for each factor.

    d. If part b. is not confirmed, please explain why each factor identified and described in response to part a. was attributable to the Great Recession as opposed to some other cause. Please provide all data, studies, and analysis in support of your response.

    e. For each factor identified and described in response to part a., please provide the reasons why it was derived for use in the demand equation(s), or why it was rejected.

    f. Please confirm that at a certain point in the future, a particular factor "attributable to the Great Recession" (e.g., employment) will start having a positive impact on the economy and will no longer be a factor "attributable to Great Recession" anymore? If confirmed, please explain under what circumstances such point can be reached. If not confirmed, please explain why this is not possible.

<u>RESPONSE</u>

    a. Please see my response to POIR No. 3, Question 2, in which I go through the variables which I attribute to the Great Recession on a variable-by-variable and equation-by-equation basis.

    b. – c. The possible explanation for each of the variables which I have attributed to the Great Recession was carefully considered, including the possibility that such factors may be due, in whole or in part, to factors besides the Great Recession. After a careful analysis of the relevant factors and the affected mail volumes, which included careful consideration of additional information beyond my econometric models, for those factors which I have attributed to the

Great Recession, I could not find sufficient evidence to support the possibility that these factors were caused by something other than the Great Recession.

For most factors, the simple answer is that there are no plausible alternate explanations for these factors which coincide so well with the Great Recession in terms of timing. Moving beyond the econometric models, it is also apparent that the factors which have affected mail volume coincide with macro-economic declines in specific industries which were affected by the effects of the Great Recession, such as declines in the number of active credit card accounts in the United States and total U.S. advertising expenditures. These changes are very clearly the result of the Great Recession and their impact on mail volume is obvious.

It is also obvious that the Great Recession has had a significant impact on the behavior of consumers, businesses, and governments within the United States (and around the world). These behavioral changes include changes to the relationship between Americans and the mail in ways that are clearly consistent with other behavioral changes observed over this same time period and appear to be in direct response to the Great Recession.

Please see my response to POIR No. 3, Question 2, for a specific look at the specific equations used in this case. Please also see my responses to Questions 19, 20, and 25, of this POIR, for example, for a more detailed explanation of my decisions to treat recent declines in overall U.S. advertising expenditures and increases in the rate of electronic diversion of mail as the result of the Great Recession.

d. N/A

e. I am not sure what is being requested here beyond what was already provided in response to part a. of this question.

f. In quantifying the impact of the Great Recession, one way to think about the issue is to ask the question: What would mail volume have been in the absence of the Great Recession?

Framed in this way, one can see that one might plausibly begin to identify a positive impact of a variable if the negative influence of said variable not only goes to zero within a particular year but becomes sufficiently positive as to bring mail volume closer to its expected level in the absence of the Great Recession. For example, in the past, it was common for macro-economic variables to grow more rapidly immediately following a recession so that average growth rates, averaged across both the recession period as well as the post-recession recovery period, remained near historical levels.

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To date, there has been no specific evidence of this type of "catch-up growth" or lessening of negative recession-induced trends associated with any mail volumes which I have analyzed for this case. Please see my responses to POIR No. 1, Question 6, and POIR No. 3, Questions 1, 4, and 6 for a further discussion of these issues.

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5. On page 5 of witness Thress's Statement, he states: "The effect of the Great Recession, as I use the term here, refers to events which affected the U.S. economy which triggered temporary and permanent losses in mail volumes as well as significant downturns in long-run mail volume trends. These factors closely parallel the factors which caused the Great Recession as it affected the overall U.S. economy." Please identify and describe the factors used in your demand equations that "triggered temporary and permanent losses in mail volumes as well as significant downturns in long-run mail volume trends" that are different from "the factors which caused the Great Recession as it affected the overall U.S. economy." As part of your response, please explain how such factors were different. If these factors are almost identical, please confirm that.

RESPONSE

The "events which affected the U.S. economy which triggered temporary and permanent losses in mail volumes" are the same "factors which caused the Great Recession". The impact of these events on mail volumes differed from their effect on other aspects of the economy, however. Specifically, "the factors which caused the Great Recession as it affected the overall U.S. economy" had a much more significant negative effect on the mail volumes than on most other parts of the economy.

Events which are closely related to the Great Recession which have had a negative impact on mail volume over the past five years include the following.

- Substantial reductions in gross private domestic investment which have not yet recovered to pre-recession levels. Moreover, even if investment had recovered to its pre-recession level, that would still be a negative influence on mail volume in that one would expect investment (and other macro variables) to be higher in 2012 than in 2007.

- Substantial declines in the level of employment in the United States which has not yet recovered to pre-recession levels

- Substantial declines in the U.S. advertising market, which fell significantly during the Great Recession, and has grown much more slowly post-recession than it had historically prior to the Great Recession

- Substantial declines in housing prices, which led to significant numbers of foreclosures, have left many Americans underwater on their mortgage, and which have not yet recovered to pre-recession levels

- Substantial declines in Americans' use of credit cards which, thus far, appear to be permanent

- Substantial declines in Americans' use of other types of debt

- Substantial efforts by American consumers, businesses, and governments to reduce

costs, including the adoption of cheaper technological alternatives to the mail

- Substantial reductions in consumption expenditures by American consumers and the loss of bills, statements, and bill payments resulting from these decisions
- Declines in the rate of household formation during and since the Great Recession
- Other changes in consumer behavior in response to the new macro-economic conditions arising in the wake of the Great Recession

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6. On page 6 of witness Thress's Statement, he states: "For example, gross private domestic investment, the primary macro-economic variable in the Postal Service's demand equations for Standard Mail, peaked in 2006PQ2, seven full quarters before the initial downturn in the U.S. macro-economy, as identified by NBER. Because of this, the exigent factors that are generally explained (here and elsewhere) as being due to the Great Recession began to adversely affect mail volumes already in FY 2007."

     a. Please identify and describe the exigent factors that are generally explained (here and elsewhere) as being due to the Great Recession.

     b. Please confirm that for purposes of determining volume loss due to the recession, you assume that the recession begins at a point when recession-related variables included in the demand equations reached their peak values?

     c. Please explain how and where the Postal Service identifies the beginning of the recession for purposes of determining the effects of the Great Recession on mail volume for each factor considered recession-related.

     d. In response to Presiding Officer's Information Request (POIR) No. 3, question 6.c., you state that the Postal Service "compare[s] the impact of the Great Recession to a baseline that assumes zero macro-economic growth." Should the Great Recession's impact on mail volume for purposes of this docket be measured (i) from the effects of the initial downturn in the U.S. macro-economy, (ii) from the bottom of a typical recession, (iii) from a point in time where the economy is stagnant (not growing or contracting), or (iv) at some other point? As part of the response to this part, please explain your rationale for your choice. Please provide all analysis and/or previous studies on which you rely.

RESPONSE

a. Please see my response to POIR No. 3, Question 2.

b. Not confirmed. The volume loss attributable to the Great Recession presented in my Further Statement in this case is only calculated starting in FY 2008. Any mail volume losses attributable to "exigent factors" that began prior to 2008PQ1 have been excluded from my calculations in this case.

Including all exigent factors, regardless of starting date, that can be attributed to the Great Recession, would add an additional mail volume loss of 3.2 billion pieces through FY 2007 to the 53.5 billion pieces that I have estimated were lost between FY 2008 and FY 2012.

c. For the purposes of this case, the Postal Service is only attributing the impact of factors affecting mail volume beginning in 2008PQ1.

d. For the purpose of this case, the calculation of the impact of the Great Recession started in FY 2008. See my responses to parts b. and c. of this question. My understanding is that the rationale for this decision was based on the Postal Service's interpretation of the Commission's previous orders.

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7. On page 6 of witness Thress's Statement, he states: "Even more significant to the Postal Service, the Postal Service's financial losses due to factors related to and triggered by the Great Recession continue to accrue even now…."

     a. Please identify and describe all factors that (i) are related to the Great Recession and (ii) all factors that are triggered by the Great Recession as those terms are used in that section of your testimony.

     b. Please explain what you mean by the terms "triggered by" and "related to" the Great Recession. If these terms and the corresponding factors are identical, please state that. If these terms and related factors are different, please explain the difference.

RESPONSE

    a. – b. The distinction which I was trying to draw between factors (i) "related to" versus (ii) "triggered by" the Great Recession was between factors that are (i) more clearly macro-economic in nature versus (ii) behavioral changes in response to (i).

    For example, the decline in total U.S. advertising expenditures was macro-economic in nature, insofar as it affected an entire industry. I would therefore identify the 2008-09 decline in advertising expenditures as being "related to" the Great Recession. In contrast, consumers' declining use of credit cards is a behavioral response to the macro-economic effects of the Great Recession (e.g., reduced employment, lower wealth due to declining housing values) that was "triggered by" the Great Recession.

    Please see my response to POIR No. 3, Question 1 and Question 5 of this POIR for some further discussion of some of the specific factors that were both "related to" and "triggered by" the Great Recession.

8. On page 7 of witness Thress's Statement, he states: "Unlike after the 2001 recession, however, where Standard Mail volume returned to pre-recession growth rates, Standard Mail volume has had only one year of meaningful growth since the declared end of the Great Recession (FY 2011, when Standard Mail volume grew 2.6 percent) and Standard Mail volume in FY 2012 was 3.3 percent below its level two years earlier. The story is similar for First-Class Mail. From FY 2004 to FY 2006, First-Class Mail volume declined, but at a fairly modest average annual rate of only 0.3 percent. From FY 2010 to FY 2012, while employment grew (albeit somewhat slowly), First-Class Mail volume declined at an average annual rate of 5.8 percent."

    a. You state that Standard Mail "has had only one year of meaningful growth since the declared end of the Great Recession." However, the Postal Service and your demand equations appear to attribute losses to the Great Recession after that year of meaningful growth. Please explain why the impact of the Great Recession on Standard Mail has not ended during (or directly after) the referenced year of meaningful growth.

    b. What caused the meaningful growth in Standard Mail volumes in FY 2011?

    c. Please confirm that Standard Mail volumes are subject to cyclical trends and that, given the growth in volumes in FY 2011, FY 2012 volumes reflect a cyclical trend. If not confirmed, please explain.

    d. On page 7 of witness Thress's Statement, he states: "if macro-economic conditions had not deteriorated between FY 2007 and FY 2012, and the relationship between mail volume and macro-economic and other factors had remained the same as before the Great Recession, total Market-Dominant mail volume would have been 53.5 billion pieces...." (emphasis added). Perhaps it's already been asked, but the assumption that the relationship between mail volumes and macro and other factors remains the same would appear to be untenable. How does he take into account the cyclical effects of those factors on mail volumes?

    <u>RESPONSE</u>

    a. My use of the term "meaningful" to refer to the growth in Standard Mail volume in FY 2011 was intended to distinguish the 2.6 percent increase in Standard Mail volume in FY 2011 from the 0.04 percent increase in Standard Mail volume the year before. Even 2.6 percent growth is below historical pre-recession norms for Standard Mail. Over the twenty years immediately preceding the onset of the Great Recession, for example, from 1986 to 2006, total Standard Mail volume grew at an average annual rate of 3.2 percent with Standard Mail volume growth exceeding 5 percent per year as recently as FY 2004 and FY 2005.

    Although somewhat tepid relative to historical norms, it did appear at that time that the "meaningful growth in Standard Mail volumes in FY 2011" could have been an indication that the advertising market was beginning to stabilize and might be returning to its pre-recession relationship to the broader macro-economy, albeit at a considerably lower level than prior to the Great Recession. In retrospect, however, the "meaningful growth in Standard Mail volumes in

FY 2011" turned out to be an aberration. The volume growth in Standard Mail in FY 2011 completely disappeared in FY 2012 and even with mild volume growth in FY 2013, total Standard Mail volume for the first three quarters of FY 2013 (60.93 billion pieces) was virtually identical to total Standard Mail volume for the first three quarters of FY 2010 (60.84 billion pieces).

Considering all of the data available since the end of the Great Recession, it is clear that the expected long-run growth rate for Standard Mail volume continues to be seriously diminished due to the lingering effects of the Great Recession.

b. It appears that the most significant source of the "meaningful growth" in Standard Mail volumes in FY 2011 was a surge in credit card solicitations. The Household Diary Study estimates that the volume of credit card solicitations sent via Standard Mail received by households by year were as follows (millions of pieces).

FY 2004	7,348
FY 2005	8,772
FY 2006	8,739
FY 2007	7,166
FY 2008	6,781
FY 2009	3,947
FY 2010	5,483
FY 2011	8,457
FY 2012	5,828

The change in credit card solicitations received by households from FY 2010 to FY 2011 (2.97 billion pieces of Standard Mail) explained more than 100 percent of the total growth in Standard Mail volume from FY 2010 to FY 2011 (2.17 billion pieces).

The Household Diary Study data are confirmed by a quote from Andrew Davidson, senior vice president at Mintel Comperemedia:

> "April [2012] marks a new low for the credit card direct mail decline that began in December 2011. The last time volumes were lower was back in March 2010. At that time a come-back in direct mail was gathering steam following severe cut backs during the recession. That come-back turned into a two-year period of expansion that peaked in June 2011 when 497 million offers were received by US households.
> Issuers have adopted a more cautious approach due to an uncertain economic environment."

Based on this data, it appears that credit card companies believed that the Great Recession was over by the end of FY 2010 and that the U.S. economy was poised to return to pre-

recession levels. Credit card issuers therefore increased their solicitation mail to pre-recession FY 2006 levels. Total credit card accounts in the U.S. were as follows (millions of accounts, as of calendar quarter 4).

2004	448.4
2005	455.9
2006	451.3
2007	481.4
2008	472.2
2009	394.3
2010	380.1
2011	386.2
2012	383.4

Judging by the lack of material change in total credit card accounts shown in the above data for the period 2010 to 2012, consumers' response to this flood of solicitations was tepid at best. Clearly, American consumers were not interested in returning to pre-recession levels of credit cards. Based on this response, credit card companies drastically cut back on their advertising mail in FY 2012, back to FY 2010 levels.

In retrospect, it seems clear that the "meaningful growth" in Standard Mail volume in FY 2011 did not indicate an actual end to the impact of the Great Recession on American consumers, but was, instead, a hopeful guess by credit card companies that the impact of the Great Recession might be abating; a guess which turned out to be premature at that time.

c. Generally speaking, the terms "cyclical" and "trend" are antonyms. The former refers to movements in both directions while the latter refers to persistent movements in a single direction. As such, I do not understand your question.

d. The phrase "the relationship between mail volume and macro-economic and other factors" within the quoted text refers to the modeled causal relationship between these variables. For example, the Standard Regular Mail demand equation includes an estimated Investment elasticity of 0.32. This means that, based on pre-Great Recession data, a decline in Investment of 10% would have been expected to lead to a reduction in Standard Regular Mail volume of 3.2%. Thus, the effects of cyclical fluctuations were expected to be taken account of by application of the estimated elasticity as the values of the investment variable changed. From FY 2007 to FY 2009, gross private domestic investment per adult declined by 31.7%. All other things being equal, an Investment elasticity of 0.32 would mean that we would have expected Standard Regular mail volume to decline by 10.2% (31.7% times 0.32). Because the

actual response of Standard Mail volume was so much larger than this, the effect of the Great Recession on Standard Mail volume appears to have been more complicated, and more significantly negative, than would have been expected by the simple historical relationship between Standard Mail and investment.

9. Table Two of witness Thress's statement includes a column entitled "Macro Economy & Recession-Induced Factors."

      a. Please confirm that all factors in this column provide the impact on mail volumes attributable to the Great Recession. If not confirmed, please explain.

      b. If applicable, please provide the revised Table Two dividing this "Macro-Economy & Recession Induced-Factors" into two: the "Macro-Economy Factors" segregated from the "Recession-Induced Factors."

<u>RESPONSE</u>

a. Confirmed.

b. Please see my response to POIR No. 3, Question 5, which separates the impact of the Great Recession that can be directly measured by macro-economic variables (identified as "Columns D:G" in the Table accompanying POIR 3, Question 5) and "unanticipated changes in mail volume in response to the Great Recession."

10. On page I-1 of witness Thress's Statement, he refers to Sources-of-Change tables filed with his testimonies in Dockets Nos. R2005-1 and R2006-1. Witness Thress states: "These tables presented the percentage change in mail volume from one Fiscal Year to the next attributable to various factors which were identified in my testimonies." Please provide a complete list of each of the "various factors" referred to on page I-1, lines 8-10 of your testimony that are no longer being used in your current statement. As part of your response, please explain and describe each such factor and why it is no longer being used.

RESPONSE

Please see my response to POIR 3, Question 7(b). Specific changes to the demand equations used by the Postal Service are documented with each filing of equations with the Postal Regulatory Commission, so, for example, changes between R2005-1 and R2006-1 were described and explained in my Testimony and supporting Library References in Docket No. R2006-1. Changes since that time are identified and explained in the Postal Service's annual filings with the Commission. See, for example, the document entitled "Changes to Econometric Demand Equations for Market Dominant Products since January, 2012" that was filed with the Commission on January 22, 2013.

11. On page I-2 of witness Thress's Statement, he states: "I use a standard order in which explanatory variables are analyzed for all mail categories: population, macroeconomic variables, time trends, Internet variables, input prices, Postal prices (nominal), competitor prices, inflation, other econometric factors (e.g., dummy variables), seasonality, and 'other' unexplained factors."

       a. Please confirm that you provide the exhaustive list of "explanatory variables" in the Library Reference USPS-R2010-4R-9, DataDictionary.docx.

       b. If not confirmed, please provide an exhaustive list of all explanatory variables (including a list of other econometric factors and other unexplained factors).

<u>RESPONSE</u>

a. Confirmed to the best of my knowledge.

b. N/A

RESPONSE OF THOMAS THRESS
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 6

12. In witness Thress's Statement and in prefaces to the library references he is sponsoring, there is a reference to three demand models and forecasting materials: (i) filed with the current docket in USPS-R2010-4R-10, (ii) filed in the original Docket No. R2010-4 in the Library Reference USPS-R2010-4-8 on July 6, 2010, and (iii) filed with the Commission on January 22, 2013.

    a. On page II-1 of witness Thress's Statement, he states: "For the other classes of mail, the equations used to construct Table Two were generally similar to the equations described in the Narrative Statement noted above, filed with the Commission on July 1, 2013." Please identify and describe all differences between that those equations used in this case and those identified and described in the "Narrative Statement" that was "filed with the Commission on July 1, 2013." Please explain the reasons for the described changes.

    b. Please explain the differences in datasets used to estimate demand equations in the current docket and in the two other referenced demand models (filed with the Commission in January 22, 2013 and filed in the original R2010-4 Docket on July 6, 2010).

    c. Please identify and describe all methodological differences between the demand model filed in the current docket and the original model filed in Docket No. R2010-4.

RESPONSE

a. The seasonal variables used to estimate the demand equations have changed since the equations filed with the Commission on July 1, 2013. See the end of my response to part c. of this question for an explanation of this change.

Outside of seasonal variables, the following specification changes have been made to the equations used in this case vis-à-vis those equations described in the documentation filed with the Commission on July 1, 2013. In all cases, the described changes were made because it was believed that the new demand equation better models mail volumes.

RESPONSE OF THOMAS THRESS
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 6

First-Class Single-Piece letters, cards, and flats

- Separate equations for First-Class single-piece letters and cards and First-Class single-piece flats have been replaced with a single equation (please see my response to POIR No. 4, Question 9).

- The combined equation used in the present case is estimated over a sample period beginning in 1983Q1; the separate equations filed with the Commission on July 1, 2013, were estimated over sample periods that started in 2004Q1.

- Employment has been replaced with the trend component of employment.

- A dummy variable equal to one since the implementation of R90-1 (D_R90) is included in the equation used in this case.

- The starting dates for the net mail diversion trends are 1993Q4, 2002Q4, and 2007Q4 in the present case versus 2004Q2 and 2007Q4 in the July 1, 2013, equations.

First-Class Workshared letters, cards, and flats

- A dummy variable equal to one since the implementation of R2006-1 rates (D_R07) was removed from the specification.

- The starting dates for the net mail diversion trends are 2002Q3, 2004Q1, and 2008Q1 in the present case versus 2002Q2 and 2008Q3 in the July 1, 2013, equations (please see my response to POIR No. 4, Question 7(a)).

First-Class International letters, cards, and flats

- Individual dummy variables equal to one in 2009Q2, 2009Q3, and 2009Q4, were replaced with a single dummy variable equal to one from 2009Q2 through 2010Q2 (D09Q1_10Q2).

- A full-sample linear time trend was added to the specification.

RESPONSE OF THOMAS THRESS
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 6

Standard Regular Mail (excluding Parcels)

- The equation used in the present case includes a single linear time trend which ends in 2007Q1. The equation filed with the Commission on July 1, 2013, included a full-sample linear time trend and additional linear time trends starting in 2006Q1 and 2012Q3 (please see my response to POIR 7, Question 6).

- A dummy variable equal to one since the implementation of MC95-1 (MC95) has been replaced by a dummy variable equal to one in 1996Q4 (D1996Q4) and a non-linear intervention variable starting in 1997Q1.

- A dummy variable equal to one since the implementation of R97-1 rates (D_R97) has been replaced by a non-linear intervention variable starting in 1999Q3.

- A dummy variable equal to one in 2002Q1 (D2002Q1) has been replaced by a dummy variable equal to one in 2002Q2 (D2002Q2.

- A dummy variable equal to one since the implementation of R2001-1 rates (D_R01) has been added to the specification.

Standard ECR Mail

- Separate measures of the trend and cyclical components of Investment have been replaced with a single measure of total Investment (per adult).

- A dummy variable equal to one since the implementation of R2006-1 rates (D_R07) has been replaced by a non-linear intervention variables starting in 2007Q4.

- A dummy variable equal to one in 2007Q3 (D2007Q3) has been removed from the specification.

- A trend variable starting in 2009Q1 has been removed from the specification.

Standard Nonprofit Mail

- The cyclical component of Investment was removed from the specification.

Standard Nonprofit ECR Mail

- The starting date of the sample period was changed from 1988Q1 to 1997Q1
- Non-linear intervention variables starting in 1997Q1, 2004Q4, and 2008Q2 were removed from specification.
- A dummy variable equal to one since the implementation of R2006-1 (D_R07) was replaced by a non-linear intervention variable starting in 2007Q3

Periodicals Mail

- The starting dates for the net mail diversion trends are 1993Q2, 2008Q2, and 2011Q2 in the present case versus 1993Q2 and 2000Q3 in the July 1, 2013, equations.
- A non-linear intervention variable starting in 2008Q2 has been removed from the specification.

Bound Printed Matter

- The starting date of the non-linear intervention variable has been changed from 2008Q4 to 2008Q3.

Media and Library Rate Mail

- No changes have been made to the Media and Library Rate demand specification.

Postal Penalty Mail

- The starting date of the sample period has changed from 1992Q1 to 2009Q1
- A logistic time trend (@LOG(TREND)) and a linear time trend interacted with a dummy variable equal to one in Quarter 1 of Federal election years (D_EL3(-2)*TREND) have been replaced by a linear time trend (TREND)
- A number of dummy variables which only varied prior to 2009Q1 have been removed from this equation.
- A dummy variable equal to one in 2012Q1 (D2012Q1) has been replaced by a dummy variable equal to one in 2013Q1 (D2013Q1).

RESPONSE OF THOMAS THRESS
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 6

Free-for-the-Blind Mail

- The starting date of the sample period has changed from 1996Q1 to 2005Q1

- A logistic time trend (@LOG(TREND-100)) has been replaced by a linear time trend (TREND).

- The cyclical component of Employment has been removed from the demand specification.

- Dummy variables equal to one in 2001Q1 and 2001Q2 have been removed from the specification.

- A non-linear intervention variable starting in 2008Q4 has been removed from the specification.

Registered Mail

- A time trend starting in 2001Q3 has been added to the specification.

Postal Insurance

- The volume of packages delivered by the Postal Service has been removed from the specification.

Certified Mail

- The starting date of the sample period has changed from 2000Q1 to 2006Q1.

- The linear time trend (TREND) has been removed from the specification.

- Dummy variables equal to one in 2000Q2, 2002Q1, and 2002Q2, and 2002Q3 have been removed from the specification.

- A time trend starting in 2011Q1 has been replaced by a non-linear Intervention variable starting in 2011Q1.

Return Receipts

- No changes have been made to the Return Receipts specification.

Money Orders

- The starting dates for the net mail diversion trends are 1996Q4, 2003Q1, and 2009Q2 in the present case versus 1996Q4, 1999Q2, and 2003Q1 in the July 1, 2013, equations.

Stamped Envelopes

- Dummy variables equal to one in 2012Q1 (D2012Q1) and 2013Q1 (D2013Q1) have been added to the specification.

Stamped Cards

- The starting date of the sample period has changed from 1993Q1 to 2004Q1.
- The price of Stamped Cards has been added to the specification.
- Dummy variables equal to one in 2012Q1, 2012Q2, and 2013Q2 have been added to the specification.

b. The most recent dataset relies on more recent data. Specifically, the demand equations used in this case are estimated using RPW data through 2013PQ3 and macro-economic and other data available as of July, 2013. The demand equations filed with the Commission on January 22, 2013, relied upon RPW data through 2012PQ4 and macro-economic and other data available as of October, 2012. The demand models filed in the original R2010-4 Docket were estimated using RPW data through 2010PQ1 and macro-economic and other data available as of April, 2010.

c. The demand equations filed in the present case and those in the original Docket No. R2010-4 feature significant methodological differences in their modeling of electronic diversion, the Great Recession, and the interaction between these two factors.

R2010-4 Demand Equations

The demand equations filed in the original Docket No. R2010-4 were estimated in April, 2010, based on RPW data through 2010PQ1. In 2010PQ1, total mail volume declined over the same period last year (SPLY) for the twelfth consecutive quarter. The first quarter of 2010 represented an improvement over the four previous quarters as volume "only" declined by 8.6 percent. Overall, total mail volume in 2010Q1 was 19.7 percent below volume three years earlier (in 2007Q1). At that time, there was a deep urgency to try to understand exactly how and why mail volumes were declining so dramatically and what that might portend for the future of mail volumes. But at the same time, volume losses of the magnitude being seen were completely unprecedented and the difference between forecasts and guesses was becoming more and more subtle.

In the case of First-Class Mail, the prevailing thinking about declining mail volumes for the decade before the Great Recession had been the threat and emergence of Internet and electronic alternatives. Hence, the first instinct in trying to understand why First-Class Mail volume declined by nearly nine percent in FY 2009 was to speculate about diversion rates. At the same time, the timing obviously coincided with the Great Recession. This led to significant investigations into the extent to which diversion rates might be affected by macro-economic conditions.

- Internet Diversion

Internet diversion was modeled explicitly within several of the demand equations used in the R2010-4 case by including Internet variables directly within these equations. This approach was already beginning to raise concerns, however. The first Internet variable to be introduced into a Postal Service demand equation was consumption expenditures on Internet Service Providers (ISP Consumption), which was first added to the First-Class single-piece mail equation in Docket No. R2001-1. ISP Consumption peaked in 2007. To allow for continued diversion after this time, the variable used in the First-Class single-piece mail equation was modified in R2010-4 to grow at the same rate as the number of Broadband subscribers in more recent years.

While the rate of growth in Broadband subscribers had not slowed so dramatically by 2010, it was clear that a forecast of Broadband subscribers would grow at a much slower pace in the near future than it had in the recent past, which would lead naturally to a projected decline in the rate of Internet diversion. Instead of declining diversion, the Postal Service's forecasts projected the current rate of Internet diversion to continue at a constant rate.

- Macro-Economic Modeling of the Great Recession

In the case of Standard Mail volume, which declined by 16.9 percent in FY 2009 and then fell an additional 11.0 percent over SPLY in 2010Q1, the initial focus was an effort to try to develop a single model that might explain both pre-recession models as well as the dramatic declines in Standard Mail volumes since the onset of the Great Recession.

Over the previous few years, experiments had begun with filtered macro-economic data. This proved fortuitous as it became clear that one key way in which the Great Recession differed from previous recent recessions was in the dramatic impact it had on the trend components of the macro-economic variables used in the Postal Service's First-Class and Standard Mail equations, employment and investment.

Based on this observation, variables were constructed called "negative trend components" for employment and investment. If the trend component of employment declined from the

previous quarter, this change in the trend component of employment was added to the "negative trend component" variable, but if the trend component of employment increased from the previous quarter (as was the usual case), the "negative trend component" variable simply remained constant. This variable thereby allowed for a possible asymmetric relationship between mail volume and the macro-economy, where mail volume was negatively affected by declining macro-economic trends but was not positively affected (through this variable) by positive macro-economic trends.

In the case of First-Class Mail, the negative trend component of employment was introduced into the Postal Service's econometric demand equations by interacting this variable with the Internet variables already included in these equations. In the case of Standard Mail, the negative trend component of investment was introduced into the Postal Service's econometric demand equations as a stand-alone variable.

Accuracy of the R2010-4 Models

In retrospect, the R2010-4 demand equations did not do a stellar job of forecasting mail volumes. The "negative trends" in employment and investment were projected to turn positive by FY 2011 and, based on that, the volume forecast filed in R2010-4 projected mail volume to increase by 6 billion pieces from FY 2010 to FY 2011 with FY 2011 mail volume projected to be 174.6 billion pieces. In reality, FY 2011 mail volume was 168.3 billion pieces, 2.6 billion fewer pieces than in FY 2010.

The R2010-4 forecast error for FY 2011 of 6.3 billion pieces is extremely close to the marginal volume loss attributed to the Great Recession for FY 2011 in my Further Statement in this case of 5.6 billion pieces. To some extent, what the R2010-4 models missed was (a) the sluggish recovery of the U.S. economy in general, and (b) the extent to which the Great Recession was going to continue to negatively affect mail volume even after the worst of the recession was over.

Intervention Analysis

As time went on and more data began to emerge, it became clear that the "negative trend components" used in R2010-4 were not flexible enough to capture the timing and magnitude of the changes that were occurring to specific mail volumes. Instead, it became more and more apparent that the specific impact of the Great Recession on mail volumes tended to be unique to the specific category of mail: it was not a general, exaggerated impact driven purely by the macro-level magnitude of the Great Recession for which one could construct a single variable to

be included in all of the Postal Service's econometric demand equations, that could explain not only the Great Recession but also earlier, less dramatic, recessions as well as periods of macro-economic growth. The Great Recession was undoubtedly the common denominator affecting mail volumes across the board, but the effect of the Great Recession was wholly unique for each mail category, in terms of the timing and impact as well as relative to the reaction of mail volume to earlier macro-economic conditions.

At the same time, it became clear that the direct use of Internet usage variables to model the diversion of mail to the Internet and other electronic alternatives was becoming untenable as Internet usage simply was not increasing in a manner at all commensurate with continuing rates of mail diversion.

Around this time, experiments were begun with an econometric technique called Intervention Analysis. The general concept behind Intervention Analysis is to allow a more flexible response to specific events (i.e., "Interventions") than can be modeled by simple dummy variables or simple time trends. Intervention Analysis was first introduced to attempt to understand potentially gradual mailer reactions to changes in rates or regulations (e.g., MC95-1 or R97-1, which created rate crossovers which required mailers to adopt new mailing practices to realize these rate savings) or to competitor behavior (e.g., the entry of FedEx into the Ground Package market).

It soon became apparent, however, that Intervention Analysis was an ideal tool for modeling both the impact of the Great Recession on specific mail volumes as well as modeling the introduction and expansion of the Internet and other electronic alternatives to the mail.

R2013-11 Demand Equations

For the demand equations used in the present case, the Great Recession is treated as an exogenous event which has had a unique impact on the volumes of specific types of mail. This impact can vary by mail category in terms of its timing, magnitude, and shape. These impacts are then modeled via Intervention analysis. Intervention variables are introduced into the Postal Service's econometric demand equations that take one of three forms, depending on the specific impact of the Great Recession on the specific category of mail being considered: an initial pulse which attenuates to a long-run plateau (e.g., Standard Regular Mail), an initial pulse which gradually goes away over time (i.e., attenuates to a long-run plateau of zero), or a linear time trend. The starting dates of these Intervention variables are chosen on a case-by-case basis based on observed mail volumes. The key diagnostic tool used to identify the need for such Intervention variables and to help pinpoint their starting periods is a Recursive Residual

analysis which calculates one-quarter-ahead forecast errors based on the Postal Service's existing econometric models. These forecast errors can then be arrayed so that trends or shifts in mail volumes that are inadequately explained by the other factors within the models (e.g., macro-economic variables, prices, etc.) can be identified and explained via Intervention analysis.

As for Internet and other electronic diversion, the demand equations used in this case no longer include explicit Internet variables for the reasons discussed above. Instead, mail diversion is modeled via Intervention trends, the starting dates of which are chosen to best fit the data (primarily using the Recursive Residual analysis described in the preceding paragraph). When evidence emerges to suggest that mail volume trends have changed over time, new trends are introduced to explain these changes.

The modeling of Internet and electronic diversion via Intervention trends has the significant advantage of being flexible enough to capture differences in the rate of such diversion across different mail categories and across different time periods. The problem with such an approach, however, is that trend variables of this nature will also capture the effect of other trends in mail volumes, including, for example, negative trends caused by the Great Recession that are not necessarily the result of changes in the rate of Internet mail diversion (although, the Internet variables themselves were subject to this same issue). These trends are best thought of, then, not as measuring "Internet" diversion or "electronic" diversion but of measuring net mail diversion, the net effect of the various trends affecting mail volumes.

These trends and their relationship to Internet and electronic diversion and the Great Recession are discussed in some detail in my responses to several POIRs, including POIR No. 3, Question 1, and Question 25 of this POIR.

In addition to these significant methodological differences, there are several more minor methodological differences between the R2010-4 and R2013-11 equations as well. First, significant efforts have been undertaken to attempt to model separate demand equations by shape for First-Class and Standard Mail. Partly as an outgrowth of this work and partly because of classification changes by the Postal Service, First-Class and Standard Regular parcels are excluded from the demand equations associated with these mail categories. First-Class parcels are now estimated via two separate demand equations, domestic and international, which include both single-piece and workshared (and both market-dominant and competitive) parcels within the same equation; mail that had been Standard Regular parcels has been reclassified as Lightweight Parcel Select and is estimated within a Parcel Select demand equation that includes

both lightweight and heavyweight Parcel Select volume. In addition to the exclusion of parcels from the demand equations associated with First-Class Mail and Standard Regular Mail, recent experimentation with shape-based demand equations has also resulted in the modeling of the demand for First-Class cards within the same demand equations as First-Class letters and flats. Hence, for First-Class domestic mail, separate demand equations are now estimated for First-Class Single-Piece letters, cards, and flats, and First-Class Workshared letters, cards, and flats.

In addition, changes have been made to the methodology by which seasonality is modeled for pre-2000 data which are reported under the Postal Service's old accounting system which used a 52-week (hence, 364-day) Fiscal Year, which moved relative to the fixed Gregorian calendar. The new methodology is intended to produce smoother seasonal patterns and allows the impact of Saturdays and Sundays to vary by mail class empirically.

Other changes which have been made to the R2010-4 demand equations over time can be tracked by reading the Postal Service's annual demand equation filings in January and July of each year. See the Postal Service's response to POIR No. 5, Question 6 for a listing of the specific dates on which these documents have been filed in recent years. The Postal Service's January filings each include a document which identifies all changes to the Postal Service's econometric equations from one January to the next.

13. On page II-3 of witness Thress's Statement, he states: "The most critical factor affecting First-Class single-piece mail volume over at least the past ten years has been the loss of this volume to electronic alternatives. The diversion of First Class single-piece mail to the Internet and other electronic alternatives is modeled through the inclusion of linear trends starting at three distinct time periods: 1993Q4, 2002Q4, and 2007Q4. The starting dates of these trends are chosen to coincide with periods when the rate of diversion appeared to accelerate for First-Class single-piece mail volume."

      a. Is it a meaningful pattern or just a coincidence that all three trends started during the same quarter? Please explain the rationale for your response.

      b. What caused the change in trend in 1993Q4? Was it attributable to a recession?

      c. What caused the change in trend in 2002Q4? Was it attributable to a recession?

      d. Given the causes identified in your responses to parts b. and c., is it possible that the change in trend in 2007Q4 was not entirely due to the Great Recession? Please explain the rationale for your response.

RESPONSE

a. Coincidence. Dates are chosen which most closely fit the available data.

b. – c. In many ways, the factors that caused these two changes in trends are similar.

In both cases, new mail-diverting technologies were emerging and being rapidly adopted by businesses and households. In the 1990s, these technologies were fax, e-mail, and electronic funds transfer (EFT). In the early 2000s, high-speed Internet was becoming more widely adopted, and e-mail use began reaching wider audiences. While all of these technologies existed in limited form for many years, their adoption accelerated over the time periods identified by these trends.

The starting dates for these two trends identified by my econometric models both fell during a period of slow growth during the protracted recovery from a recession. While the 1990-91 recession officially ended in March 1991, and the 2001 recession officially ended in December, 2001, employment was slow to recover in both cases. Private employment per adult bottomed out following the 1990-91 recession in 1993PQ1 and following the 2001 recession in 2003PQ4. Hence, the timing of the time trends in the First-Class Single-Piece mail equation coincide broadly, but not specifically, with the bottoming out of employment following the last two recessions before the Great Recession.

The timing of the net mail diversion trends starting in 1993Q4 and 2002Q4 in the First-Class Single-Piece mail equation could be because these earlier economic downturns may have influenced the speed at which existing mail-diverting technologies were adopted. Because of

the network externalities inherent in communication and information technology, small increases in adoption during the recession period could have set off larger cumulative effects that began to emerge more strongly after the recession was over.

While macro-economic conditions could have played some factor in the timing of these trends, technological factors appear to have been the more significant driver of both of these trends. The price of fax machines, for example, fell dramatically in the early 1990s, as did the price of home Internet over the same time period. Because of network externalities inherent in communications technologies, a fall in prices could have large effects on the rate of adoption. These factors undoubtedly contributed to the net mail diversion trend that starts in 1993Q4. Increasing availability and ease of use of home Internet over this same time period undoubtedly played a role as well. Growing broadband availability (and, hence, usage) likely contributed to the increased net mail diversion starting in 2002Q4 and is probably mostly not related to the 2001 recession.

Given the nature of these trend variables, it is also likely that the changes in the rate of net mail diversion at these particular times was due to changes in other underlying trends that might have affected mail volume (some positive, some negative) that may have been unrelated to the Internet or electronic diversion rates. Trends within industries which are particularly heavy users of mail – e.g., banking, advertising, housing – are likely to be picked up by these trends in the same way that more recent trends in these industries caused by the Great Recession are explained by the more recent net mail diversion trends which I have attributed to the Great Recession in this case.

d. Please see my responses to POIR No. 3, Questions 1 and 2, and Questions 1 and 25 of this POIR.

RESPONSE OF THOMAS THRESS
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 6

14. Please update the "Source of Change by Year" analysis in Library Reference USPS-R2010-4R/10, ExigentImpact.xls, tab "Volumes," to include FY 2013 and FY 2014 before-rates volume projections.

RESPONSE

A revised version of ExigentImpact.xlsx is being filed with this response which extends through FY 2014 (before-rates). This file is called POIR.6.Q.14.ExigentImpact.xlsx. The source file for ExigentImpact.xlsx has also been updated and is also being filed with this response with the name POIR.6.Q.14.S-O-C.Calcs.xlsx. These files also incorporate the corrections filed in response to POIR 5, Question 9.

Updated versions of Tables One and Two of my Further Statement extended through FY 2014 (before-rates) can be found on sheet 'Testimony Tables' of POIR.6.Q.14.ExigentImpact.xlsx. The updated Table One is presented here for convenience.

TABLE ONE (updated): Exigent FY 2008 – 2014 Losses Attributable to the Great Recession
(Market-Dominant mail only, all numbers in millions of pieces)

	2008	2008 - 09	2008 - 10	2008 - 11	2008 - 12	2008 - 13	2008 - 14
First-Class Mail	(3,926.9)	(10,037.0)	(15,031.7)	(19,044.0)	(22,590.2)	(25,893.0)	(29,063.9)
Standard Mail	(6,960.2)	(23,928.6)	(25,989.5)	(27,397.0)	(29,121.5)	(30,787.3)	(32,462.2)
Periodicals Mail	(165.3)	(682.4)	(1,161.4)	(1,356.6)	(1,623.0)	(1,876.6)	(2,118.0)
Package Services	(8.7)	(94.3)	(133.3)	(166.3)	(193.9)	(215.8)	(233.6)
TOTAL MARKET-DOMINANT MAIL	**(11,061.1)**	**(34,759.4)**	**(42,333.1)**	**(47,981.1)**	**(53,545.8)**	**(58,789.9)**	**(63,894.8)**

Extending my analysis through FY 2014 (before-rates), I estimate that the Great Recession is expected to have reduced Postal Service market-dominant mail volumes by 63.9 billion pieces by the end of FY 2014.

17. On page II-6 of witness Thress's Statement, he states: "Prior to 2002, there was very little, if any, apparent Internet diversion of First-Class workshared mail (or, to the extent such diversion existed, its presence was offset by other factors). The rate of diversion actually attenuated somewhat starting 2004, but more recently, negative economic conditions have acted as a trigger for increased diversion."

     a. Please confirm that you are attributing all of the increased diversion to the more recent negative economic conditions. If not confirmed, please explain.

     b. Is it possible that the increasing rate of diversion could be due to factors in addition to, or in lieu of, the more recent negative economic conditions? Please explain the rationale for your response.

RESPONSE

a. – b. Please see my response to Question 25 of this POIR.

18. Please refer to witness Thress's Statement.

    a. On page II-5 of witness Thress's Statement, he uses the term "Private Employment." Please define this term and provide the source for the data.

    b. On page II-8 of witness Thress's Statement, he uses the term "gross private domestic investment (INVR) per adult." See also witness Thress's Statement at II-12. Please define this term and provide the source for the data.

<u>RESPONSE</u>

    a. Total private employment refers to the total number of people employed by private companies with the United States. These data are compiled by the U.S. Census Bureau. I obtain these data from IHS Global Insight.

    b. Gross private domestic investment refers to investment within the United States by private entities without inventory adjustments. These data are compiled by the U.S. Bureau of Economic Analysis. I obtain these data from IHS Global Insight.

19. On page II-8 of witness Thress's Statement, he states: "The second Intervention variable is included in recognition of the fact that the most recent recession hit advertising expenditures, and, hence, Standard mail volume, much harder than would have been expected, even given the decline that occurred in private investment. To capture this effect econometrically, an Intervention variable was added to the Standard Regular demand equation that starts in 2008Q2." Is it possible that Standard Mail volume was hit much harder than would have been expected, even given the decline that occurred in private investment because it was due to factors other than the Great Recession? Please explain the rationale for your response.

RESPONSE

As I have noted in earlier POIR responses (e.g., POIR No. 1, questions 4 and 9, and POIR No. 3, questions 1 and 2), the decline in Standard Mail revenues in FY 2008 and FY 2009 is essentially identical, in percentage terms, to the decline in total U.S. advertising expenditures over the same time period. Based on this, it seems undeniable that the primary factor which caused Standard Mail volume to be hit "much harder than would have been expected" was the hit taken by the U.S. advertising market in general.

In FY 2007, total U.S. advertising expenditures were 1.49 percent of GDP (advertising's lowest GDP share since FY 1993). If total advertising expenditures were 1.49 percent of total GDP in FY 2012, U.S. advertising expenditures would have totaled $231.9 billion, which is $57 billion more than they actually were.

In FY 2012, Standard Mail revenue was 9.6 percent of total advertising expenditures: 9.6 percent of the missing $57 billion would be $5.5 billion more Standard Mail revenue.

Average revenue per-piece for Standard Mail was $0.21 in FY 2012. Dividing $5.5 billion in lost revenue by $0.21 revenue per-piece translates to lost volume of **26.1 billion** pieces of Standard Mail directly attributable to the fact that advertising expenditures have not kept pace with GDP. This is very close to the estimated loss of **29.1 billion** pieces of Standard Mail which I attribute in my Statement to the Great Recession. And this is before taking into account the fact that GDP itself is below where it would have been without the Great Recession.

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20. On page II-9 of witness Thress's Statement, he states: "The second trend, which starts in 2007Q1, has a negative coefficient which perfectly offsets the positive long-run trend, reflecting a change in direct-mail's role within the advertising marketplace which began with the recent downturn in the overall advertising market."

     a. Is it fair to say that the change in direct-mail's role within the advertising marketplace is entirely due to the Great Recession? Please explain the rationale for your response.

     b. Is it fair to say that the recent downturn in the overall advertising market is entirely due to the Great Recession? Please explain the rationale for your response.

RESPONSE

a. As I have noted in earlier POIR responses (e.g., POIR No. 1, questions 4 and 9, and POIR No. 3, questions 1 and 2), Standard Mail revenues as a share of total U.S. advertising expenditures remained quite constant through the heart of the Great Recession. Standard Mail revenue accounted for 9.8 percent of total U.S. advertising expenditures in FY 2007. Standard Mail's share of the U.S. advertising market actually grew over the next three years, peaking at 10.0 percent in FY 2010.

The more recent decline in Standard Mail's share of the U.S. advertising market in FY 2012 (to 9.6 percent) is not attributed to the Great Recession in my Further Statement. Please see my response to POIR No. 3, Question 2.

b. In the past, the Postal Service and RCF have used annual advertising expenditures data compiled by Robert J. Coen of Universal McCann. Mr. Coen has reported annual U.S. advertising expenditures under a consistent definition dating back to at least 1940, and for most years dating back to 1914. Unfortunately, Mr. Coen has retired, so his data are no longer being updated, which is why my earlier references to advertising expenditures data relied upon data from Pivotal. According to Mr. Coen's data, total advertising expenditures declined year over year on only four occasions between 1940 and 2006: in 1942 (-4.0 percent), 1961 (-0.8 percent), 1991 (-1.2 percent), and 2001 (-6.5 percent). The first of these corresponds with World War II, while the latter three correspond to recessions. The historical evidence strongly suggests that declines in total U.S. advertising expenditures occur only during economic downturns or because of extraordinary circumstances (or both in the case of 2001).

Prior to 2009, the last time that total U.S. advertising expenditures declined by more than 6.5 percent in one year was 1933, which was the fourth consecutive year of double-digit declines in advertising expenditures from the 1929 peak that immediately preceded the Great Depression.

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Given this history of U.S. advertising expenditures, it seems eminently "fair to say that the recent downturn in the overall advertising market is entirely due to the Great Recession."

21. On page II-14 of witness Thress's Statement, he states: "The Standard Nonprofit mail equation includes a full-sample linear time trend, TREND and a second time trend starting in 2011Q2." Please explain why you included the second time trend starting in 2011Q2 as attributable to the Great Recession.

RESPONSE

Please see my response to POIR No. 3, Question 2.

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22. On page II-15 of witness Thress's Statement, he states: "A second Intervention variable is included in the Standard Nonprofit equation starting in 2009Q2 to capture the extraordinary impact of the 'Great Recession' on Standard Nonprofit mail volumes. This Intervention variable follows the same specification as the 1997Q1 Intervention variable, except that the long-run step value, ω_2, is set equal to zero."

        a. Please explain why you included this non-linear intervention variable starting in 2009Q2 (page II-16) as attributable to the Great Recession.

        b. What was the cause of the 1997Q1 intervention variable that essentially follows the same specification as the non-linear intervention variable starting in 2009Q2?

<u>RESPONSE</u>

a. Please see my response to POIR No. 3, Question 2.

b. Nonprofit classification reform, MC96-1, was implemented in 1997Q1 (October, 1996). One feature of Nonprofit classification reform was that the price of Standard Nonprofit automation 5-digit letters was set below the price of Standard Nonprofit ECR basic letters. This led to the migration of some mail from Standard Nonprofit ECR basic letters to Standard Nonprofit automation 5-digit letters. This migration was not instantaneous as mailers had to begin to barcode their mail to take advantage of this cost-saving opportunity. The non-linear Intervention specification is therefore used to more accurately model the gradual shift of mail over this time period.

24. Please refer to witness Thress's response to POIR No. 1, question 9 which discusses the Postal Service's belief that the Great Recession had a significant impact on long-run macro-economic trend.

   a. Please explain, in particular, why the Postal Service believes that the trend component of employment is to be included in the First-Class single-piece letters, cards, and flat demand equation **and attributed to the Great Recession**. *See* witness Thress's Statement at II-2.

   b. Please explain why the Postal Service included the trend component of "Investment" as a separate explanatory variable into the Standard Nonprofit equation **and attributed to the Great Recession**. *See* witness Thress's Statement at II-14.

RESPONSE

a. The First-Class single-piece letters, cards, and flats demand equation presented in this case includes the trend component of employment based on experiments with alternative macro-economic specifications, including total employment, the trend component of employment, and the cyclical component of employment. See my responses to POIR No. 3, Question 8, and POIR No. 4, Question 7(d), for a discussion of the reasons for excluding total employment and the cyclical component of employment from this equation.

Please see my responses to POIR No. 1, question 9, and POIR No. 3, question 4. The Great Recession has clearly affected the level of private employment in the United States. Changes in employment levels have been found to affect mail volumes for reasons that I think are obvious and which I have discussed repeatedly in numerous documents filed with the Postal Regulatory Commission. Please see my response to POIR No. 1, question 9, for a detailed explanation of why mailers might respond differently to long-run versus short-run changes in their employment status as well as data that support the notion that U.S. consumers did, in fact, react to the Great Recession in ways that are (a) ongoing even today, and (b) directly related to mail volumes.

b. The Standard Nonprofit demand equation presented in this case includes the trend component of investment based on experiments with alternative macro-economic specifications, including total investment, the trend component of investment, and the cyclical component of investment. See my response to POIR No. 4, Question 7(d), for a discussion of the reasons for excluding the cyclical component of investment from this equation.

Please see my response to POIR No. 1, question 9, for an explanation of why changes to the trend component and cyclical component of the macro-economy may affect mail differently. As one example of how the Great Recession affected the trend component of an important

macro-economic driver of Standard Nonprofit Mail volume, please see the data on total U.S. advertising expenditures which I have presented and discussed in several previous responses to POIRs (e.g., POIR No. 1, questions 4 and 9; POIR No. 3, questions 1 and 2; as well as Questions 19 and 20 of this POIR). These data clearly indicate that the trend in total U.S. advertising expenditures has changed as a result of the Great Recession.

25. In the response of witness Thress to POIR No.3, question 1, he states: "The Great Recession dramatically altered the behavior of consumers, businesses, and governments within the United States and around the world. One effect of these changes may well have been an increase in the diversion of some mail to the Internet and other electronic alternatives. To the extent that such increased diversion was a reaction to the Great Recession, it is certainly reasonable and appropriate to attribute such volume losses to the Great Recession."

  a. Is it the Postal Service's position that there would have been no increase in the rate of diversion if the Great Recession has not occurred? Please explain the rationale underlying your response.

  b. If the increased electronic diversion could have happened without the Great Recession, how do you account for this in your demand equations?

RESPONSE

a. Based on the econometric demand equations used in this case, it is estimated that the Postal Service lost 16.6 billion pieces of mail from FY 2002 to FY 2007 (just over 1 percent per year) from net mail diversion trends which pre-date the Great Recession. This lost volume would have been expected to remain lost, with or without the Great Recession, and the rate of diversion over this time period would have been expected to continue at the same percentage rate through at least FY 2012, with or without the Great Recession, reducing mail volume by an additional 12.4 billion pieces over this time period (just over 1 percent per year). (The lower number of diverted pieces in the latter time period is because the constant percentage diversion rate for First-Class Single-Piece Mail - four percent per year - is applied to a volume that was nearly 20 percent lower in FY 2007 than in FY 2002.)

As explained in my response to POIR No. 3, Question 1, these "diversion" trends explain all trends in mail volumes which are not otherwise accounted for, both positive and negative, and due to electronic diversion and other factors. Specifically, as discussed in my responses to POIR No. 3, questions 1 and 2, the negative time trends which coincide with the Great Recession are picking up negative effects on mail volumes beyond the increased use of electronic alternatives to the mail. Hence, the "increase in the diversion of some mail to the other Internet and other electronic alternatives" is not the only factor being picked up by these trends that coincide with the Great Recession and, in fact, in many cases is not even the most significant factor being picked up by these trends.

With that said, to directly answer your question, the baseline assumption underlying the Postal Service's econometric demand equations and volume forecasting methodology – in general, not only in this case – is that the *rate* of electronic diversion is expected to remain constant in the absence of evidence to the contrary.

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There has been a great deal of research on the shape of consumer adoption of technological innovations. Based on this theory and subsequent research, it has been observed that the adoption of new technologies – hybrid corn, cable television, cell phones, Blu-Ray players, the Internet – generally follows an "s-curve". An s-curve adoption pattern begins slowly with tentative initial adoption by "early adopters" before an inflection point which leads to a period of rapid adoption. Eventually, the rate of adoption begins to approach its ceiling level at which point the rate of adoption attenuates significantly before eventually plateauing.

A typical adoption curve for new technology is shown below.

Technology Adoption S-Curve
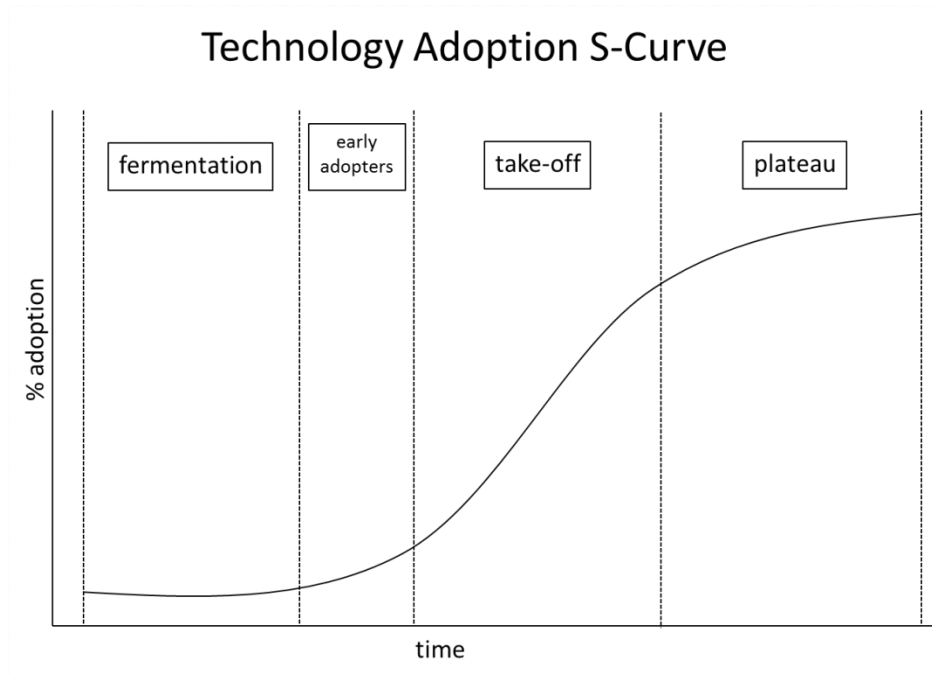
The rapid growth in direct-mail advertising in the mid-to-late 1980s due to technological innovations in mailing lists followed this type of pattern which was modeled econometrically in the Postal Service's demand equations for third-class bulk mail (and later extended to First-Class Mail and Bound Printed Matter) via what were called "z-variables" (see, for example, the Direct Testimony of Dr. George S. Tolley in Docket No, R94-1). Several scholarly articles on this topic are listed at the end of my answer to this question.

The adoption of Internet and electronic alternatives to mail would be expected to follow a similar pattern. Conversely, the rate of diversion away from the mail and toward electronic alternatives would be expected to follow an inverted s-curve.

Broadband penetration (Broadband subscribers divided by total households) within the United States is an excellent example of a typical technological adoption curve.
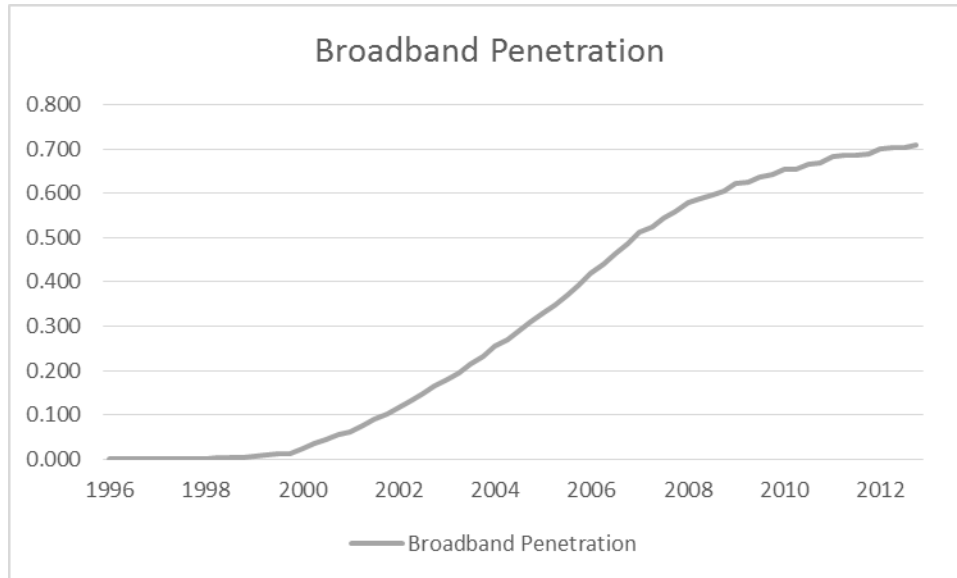
Based on this graph, if Internet diversion of mail tracked exactly with overall Broadband penetration, the rate of additional mail diversion to the Internet would have begun to slow down somewhere between perhaps 2006 and 2008 and would be nearing zero today. If Internet diversion of mail lags overall Broadband penetration, mail diversion would still be expected to follow a similar pattern, although the exact date at which diversion rates would be expected to begin to attenuate would depend on the exact lag between Broadband adoption and mail diversion. But as the above graph shows, even a lag of five to six years could still lead to the hypothesis that the rate of mail diversion ought to have either already begun to attenuate or may begin to attenuate in the near future.

Given this expectation of s-curve adoption of these sorts of alternatives to the mail, the expected rate of electronic diversion in the future will depend on precisely where one sits on the s-curve. For relatively new forms of electronic diversion, one might plausibly expect to be near the bottom of the curve (e.g., Broadband penetration in the year 2000), in which case, one might expect the rate of diversion to increase in the future. For more mature forms of electronic diversion, one might more reasonably expect to be near the plateau (e.g., Broadband penetration in the year 2011), in which case, one might expect the rate of diversion to decrease in the future.

Different types of electronic diversion, even those which may affect a single type of mail, are likely to be at different points along these curves. For example, electronic bill-payment alternatives have existed for a fairly long time now and could plausibly be thought to represent a slowing level of adoption. Virtually all periodicals now have a companion Internet site; hence, one might speculate that further Internet diversion of Periodicals Mail volume might be expected to begin to attenuate soon.

Given the wide variety of likely places on the "s-curve" for different types of electronic diversion, a baseline assumption of a constant rate of diversion seems most prudent.

The Theory of Diffusion Innovations suggests that technological adoption can be expected to follow a smooth path. Sudden changes in the rate or level of adoption of technology are therefore most likely to be the result of specific inciting events. It seems clear that the Great Recession could be one such event.

American consumers have altered their behavior in many ways in response to the Great Recession. This includes, for example, a reluctance to incur debt. Such new-found frugality might also have encouraged an increasing number of Americans to seek lower-cost alternatives to everyday tasks, including, for example, abandoning magazine subscriptions given the easy availability of free online alternatives.

In addition, the measured rate of electronic diversion could actually change even in the absence of changes by any individuals if, for example, the consumers most likely to have given up credit cards (and, hence, credit card statements and credit card bill payments) were more likely to have been paying their credit card bills by mail before the Great Recession. This seems likely to have been the case, as the Great Recession had a disproportionately negative impact on lower-income and less-educated Americans. These two characteristics also correlate strongly with bill-payment by mail.

b. It is not possible to isolate the separate effects of coincident trends on mail volume econometrically. The econometric demand equations presented in this case are only capable of measuring net mail diversion over a particular time period. In order to identify the specific factors underlying net mail diversion, it is necessary to step outside of the econometric model and seek outside information on what these factors might be and their relative importance. Please see my responses to POIR No. 3, Questions 1 and 2 as well as my response to part a. of this question for an explanation of how I arrived at my determinations regarding the extent to which net mail diversion since 2007 is the result of the Great Recession.

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<u>Selected references on Technological Adoption</u>:

Diffusion of Innovations, by Everett Rogers, originally published in 1962 (fifth edition, 2003).

"Information Technology Diffusion: A Review of Empirical Research", Robert G. Fichman, MIT Sloan School of Management, June, 1992.

"Toward a Theory of the adoption and diffusion of software process innovations", R.G. Fichman and C.F. Kemerer, IFIP Working Conference on Diffusion, Transfer and Implementation of Information Technology, Pittsburgh, PA, October 11-13, 1993.

"Adoption of Technologies with Network Effects: An Empirical Examination of the Adoption of Automated Teller Machines", Garth Saloner and Andrea Shepard, *The RAND Journal of Economics*, Vol. 26, No. 3 (Autumn, 1995), pp. 479-501.

"Models of Technology Diffusion", P.A. Geroski, *Research Policy* 29 (2000), pp. 603-625.

"Evidence on Learning and Network Externalities in the Diffusion of Home Computers", Austan Goolsbee and Peter J. Klenow, *Journal of Law and Economics*, Vol. 45, No. 2 (October 2002), pp. 317-343.

"Adoption of New Technology", Bronwyn H. Hall and Beethika Khan, UC Berkeley Working Papers, Department of Economics, Working Paper No. E03-330, May, 2003.

"Network Externalities and Technology Adoption: Lessons from Electronic Payments", Gautam Gowrisankaran and Joanna Stavins, *The RAND Journal of Economics*, Vol. 35, No. 2 (Summer, 2004), pp. 260-276.

RESPONSE OF STEPHEN J. NICKERSON
TO PRESIDING OFFICER'S INFORMATION REQUEST NO. 6

2. On page 15 of the Statement of Stephen J. Nickerson on Behalf of the United States Postal Service, September 26, 2013 (witness Nickerson's Statement), he states: "All three forecast scenarios assume no price increase for Competitive Products. However, it is anticipated that a price increase for Competitive Products will also be effective on January 26, 2014. Actual price changes for Competitive Products will be decided by the USPS Board of Governors and announced at a later date. Given that Competitive products' revenues are less than 20 percent of total revenues, any possible price increase on this population will not materially impact our liquidity or the analysis in this filing."

a. Please place an upper bound on your definition of "not materially impact."

b. For each of the last three price changes of general applicability on competitive products (Docket Nos. CP2011-26, CP2012-2, and CP2013-3), please state (i) the overall average percentage increase in revenue, and (ii) the estimated total annual dollar increase in contribution.

c. If the "anticipated" price increase for competitive products is "decided by the USPS Board of Governors during the pendency of this case," please update all relevant Postal Service filings to take these competitive products price changes into account.

RESPONSE

(a) The statement "not materially impact" is of course judgmental in nature, -- and depends on what you are comparing. As such we have no definitive upper or lower bound. Recently, as shown below, Competitive price changes generate approximately $200 to $700 million in annualized contribution, although the increase at the high end of that range included the initial bump up from material increases implemented for several products when they were first shifted from Market Dominant to Competitive. At the time of this Exigent filing it appeared that the Competitive filing would be closer to the lower end of this range. In any case, comparing a potential increase in contribution in the range of hundreds of millions of dollars (and an equivalent increase in liquidity) to over $60 billion in liabilities (including $15 billion in debt to the U.S. Treasury, $16.7 billion owed to the Postal Retiree Health Benefit Fund and over $16 billion in accrued workers' compensation liabilities) to me does not necessarily amount to a material improvement in our financial position.

(b) Docket No. CP2011-26 (i.) 2.1 percent increase, (ii) $256 million contribution
Docket No. CP2012-2 (i) 1.2 percent increase, (ii) $293 million contribution
Docket No. CP2013-3 (i) 2.8 percent increase, (ii) $705 million contribution

(c) The price increase for competitive products is not final until filed. Filing is currently scheduled for November 13, 2013.

15.   This question refers to Library Reference USPS-LR-R2010-4R/8, FY2014BR.CompSumRpt.BR—Final.xls, "ComponentSummary", Rows 234 and 248.

a.   Please identify the major factors that resulted in "Miscellaneous Support" costs increasing from $20.281 million in FY 2013 to $320.281 million in FY 2014 (Before Rates).

b.   Please identify the major factors that resulted in "Workers Compensation" costs increasing from $421.134 million in FY 2012 to $2,093.817 million in FY 2014 (Before Rates).

c.   For each major factor identified in response to parts a. and b., please identify the dollar amount of costs that the Postal Service has attributed to that factor in FY 2014, and provide all data and analyses on which the Postal Service relies.

RESPONSE

(a) "Miscellaneous Support" includes contingency costs with no specific purpose other than to provide some risk protection in a volatile financial environment. It varies from time to time depending on management discretion. $300 million is a small contingency for a $65 billion organization.

(b) Workers' Compensation cost increases from a **projected** $421 million in **FY2013** to $2,093 million in FY2014 are attributable to the combined impact of changes in the discount (interest) and inflation rates, routine changes in actuarial estimation, new compensation and medical cases, and the progression of existing cases.

Actuarial estimations and projected cash payments that will be paid well into the future have substantial impact on our Workers Compensation. Future cash payments must be converted to present-day dollars, or discounted, by applying the current rates at which the liability could theoretically be settled. Discount rates can fluctuate significantly from period to period with changes in the economic and interest rate environment. Even a very small change in discount rates can have a large impact, as a 1 percent decrease in rates at September 30, 2013 would have resulted in a $2.1 billion increase of the liability.

At the time of the Exigent filing forecasts for discounts rates were rapidly increasing and actuarial estimates of the estimated liability were still being finalized. As a result, accounting adjustments for Fair Value produced a negative $1.9 billion adjustment, leading to the $421 million expense estimate for FY 2013.

(c.) Part (a) is based on management discretion, there are no workpapers. Details on Part (b) are shown in an Excel file that will be provided shortly.

16. On pages 9-10 of the Request, it states: "Mr. Thress's statement documents a source-of-change analysis that decomposes the volume losses of the last five years into those stemming from the recession and those stemming from other factors. Mr. Thress concludes that, *in FY2012 alone*, the amount of lost volume attributable to the recession was approximately 53.546 billion pieces." (emphasis added). Similarly, on page 11 of the Request, it states: "The table above shows that, but for the recession, the Postal Service would have processed approximately 54 billion more mail pieces *in FY2012 alone*, resulting in approximately $16.9 billion in additional revenue and $6.7 billion in additional contribution for that year." (emphasis added). However, Table 2 on page 10 appears to attribute those figures to the cumulative years of "FY2008 through FY2012." Please reconcile Table 2 with the statements in the Request.

RESPONSE:

Both quoted statements from the Request are accurate, and there is no

inconsistency to be reconciled. "Lost" volume in any given year can be volume that is

lost for the first time in that year, or volume that was first lost in a previous year, but

continues to be lost in the subsequent year. The effect of both types of lost volume is

the same in that given year. So, as shown in Table Two on page 10, the volume of mail

lost to the Great Recession in FY 2012 totaled 53.546 billion pieces, of which 47.981

billion were pieces first lost in previous years (between 2008 and 2011), and an

additional 5.565 billion were pieces first lost in 2012.

In contrast, if one wished to calculate the *cumulative* volume lost because of the

Great Recession over the period from FY 2008 through FY 2012, it would be necessary

to add (from the penultimate column of Table Two) 11.1 billion from FY2008, plus 34.8

billion from FY2009, plus 42.3 billion from FY2010, plus 48.0 billion from FY2011, plus

53.5 billion from 2012. That figure (roughly 189.7 billion) is the difference between what

total volume over that five-year period would have been without the Great Recession,

versus what total volume over that five-year period actually was, given the occurrence

of the Great Recession. But if one instead wishes to focus exclusively on FY2012

alone, then, as properly stated on pages 9-10 of the Request, the amount of lost volume

in that year alone was 53.5 billion pieces. Or, as correctly restated on page 11 of the

Request, if there had been no Great Recession, then the Postal Service would have

processed and delivered approximately 54 billion more pieces of mail in that year alone.

(Similarly, if focusing exclusively on FY2011, without the Great Recession, the Postal

Service would have delivered approximately 49 billion more pieces of mail in that year

alone. And, of course, the figures from Table Two on page 10 can be used to construct

similar corresponding statements for FY2010, FY2009, and FY2008.)

To understand this in more concrete terms, consider a simple example of three

college friends, each of whom, in all relevant years before 2008, used First-Class Mail

to send a donation to their school. Had the Great Recession not occurred and their

donations patterns continued, the Postal Service would have handled 3 pieces of mail

each year between 2008 and 2012 from these donations, for a total of 15 pieces over

the five years. Now suppose that one of the three lost their job in 2008, and quit making

donations. The Postal Service "lost" 1 piece of mail in 2008, but that loss carries over

into each subsequent year (assuming that friend remains unable to resume

contributions). Further assume that, in 2010, another of the friends took a substantial

salary cut because of the Great Recession, and also stopped donating. So another

piece of mail has been "lost" in 2010, but that likewise carries over. In 2012, rather than

3 pieces of mail from these donations, the Postal Service handles only 1 piece. But for

the Great Recession, the Postal Service would have handled 2 more pieces in 2012

alone. (That remains true even though neither piece was "first" lost in 2012.) But the

cumulative loss over the entire five-year period, compared with 15 pieces expected *a priori*, is 1 piece lost in 2008, 1 piece lost in 2009, 2 pieces lost in 2010, 2 pieces lost in 2011, and 2 pieces lost in 2012, for a total cumulative loss of 8 pieces lost. The advantage of focusing on one year alone is that it gives a more accurate indication of the magnitude of the effect on an annual basis. The following table shows the results of this hypothetical by year.

	2007	2008	2009	2010	2011	2012	08-12 Total
Without Recession	3	3	3	3	3	3	15
With Recession	3	2	2	1	1	1	7
Lost Volume		1	1	2	2	2	8

23. This question refers to Table 5.1 U.S. Advertising Spending Growth by Medium, 2010-2012 (Percent Growth from Prior Year) on page 39 of the FY 2012 Household Diary Study.

      a. Please state in dollars the U.S. annual advertising spending by medium underlying this chart.
      b. Please provide annual advertising spending by medium in the same format as your response to part a. for 2007, 2008, and 2009.

RESPONSE:

U.S. Advertising Spending by Medium ($ in Billions)						
Medium	2007	2008	2009	2010	2011	2012
Direct Mail	$ 24.9	$ 23.5	$ 19.9	$ 20.6	$ 20.4	$ 19.2
Newspapers	$ 42.2	$ 34.7	$ 24.8	$ 22.8	$ 20.7	$ 19.4
Television	$ 57.3	$ 57.4	$ 51.4	$ 57.7	$ 58.5	$ 62.7
Radio	$ 19.7	$ 17.8	$ 14.3	$ 15.0	$ 14.9	$ 15.0
Magazines	$ 21.0	$ 19.5	$ 15.6	$ 15.6	$ 15.5	$ 14.4
Internet	$ 21.2	$ 23.4	$ 22.7	$ 26.0	$ 31.7	$ 36.3
All Other	$ 19.7	$ 18.2	$ 14.9	$ 13.0	$ 11.9	$ 10.9
Total	$ 206.1	$ 194.5	$ 163.4	$ 170.8	$ 173.7	$ 178.2

Source: Magna Advertising Group - estimates

26. Please refer to the Statement of Altaf Taufique on Behalf of the United States Postal Service, September 26, 2013 (witness Taufique's Statement), Appendix A at 15, which shows the workshare discounts and benchmarks for Media Mail and Library Mail.

> a. Please confirm that for both Media Mail and Library Mail, the avoided costs of Basic and 5-Digit are transposed.

> b. If part a. is confirmed, please provide a revised version of the table, and a revised discussion of the worksharing passthroughs for this product, including justifications for setting the discount for Basic presort in excess of avoided costs, and for setting the discount for 5-Digit presort substantially below the avoided costs. *See* 39 C.F.R. § 3010.12(b)(6).

> c. If part a. is not confirmed, please provide a source for the Basic and 5 Digit avoided costs estimates and reconcile those estimates with FY 2012 ACD, Table VII-25 at 131.

RESPONSE:

> a. Confirmed.

> b. Even though the cost avoidances were transposed, the justifications for setting the discount for Basic presort in excess of avoided costs and the discounts for 5-Digit presort below avoided costs are essentially unchanged   A more detailed discussion than was provided in the original Statement, similar to the description of the workshare discounts provided in the CPI case, Docket No. R2013-10, (but with corrected passthroughs provided in **bold**), is provided below:

"The workshare discount passthroughs for Media Mail and Library Mail

*Basic presort are **163.4** percent and **156.7** percent respectively. These*

Basic presort discounts are above 100 percent primarily because of a

change in costing methodology approved by the Commission in Docket

**RESPONSE OF ALTAF TAUFIQUE TO
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No. RM2012-1[1] that shifted a large amount of costs away from Basic

presort and toward 5-Digit presort. Bringing the Basic presort all the way

down to 100 percent immediately would create an enormous price shock

for this group of mailers, so the Postal Service intends to bring the

workshare discount down in future price adjustments gradually rather than

all at once. Furthermore, the discount is provided in connection with

subclasses of mail consisting exclusively of mail matter of educational,

cultural, scientific, or informational value. The educational, cultural,

scientific, and informational value exception [Section 3622(e)(2)(C)] also

applies to 5-Digit Presort discounts, which were left at 58.2 percent for

Media Mail and 55.2 percent for Library Mail."

Although the transposition of the cost avoidances does not impact the

justifications for the passthroughs, it does have an impact on the

methodology used for the Exigent pricing described at page 5 of the

Taufique statement. The intent of this methodology was to avoid

increasing above-100-percent passthroughs. As a result of the

transposition error, the pass-through for Basic presort for Media Mail

increased from 156.7 to 163.3 percent, and the passthrough for Library

Mail increased from 150.0 to 156.7 percent, contrary to stated intentions.

Also, as a result of the error, the Postal Service did not increase prices for

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[1] See Docket No. RM2012-1, Order No 1053, at 53 (December 16, 2011).

5-Digit Presort so as to bring the 5-digit passthroughs closer to 100 percent.

If the numbers had not been transposed and the methodology had been executed flawlessly, the net impact would have been prices for Media/Library Mail that were 0.17 percent higher, while prices for other Package Services products would have been approximately (and collectively) 0.09 percent lower. Given that the exigent increases for Package Services products which received price increases (Inbound Parcel Post had no exigent price increase) ranged from 4.232 percent to 4.626 percent, correcting this error and changing all of the Package Services prices to follow the stated methodology precisely would not result in any meaningful price changes. Most price cells would, in fact, remain unchanged. The Postal Service would prefer to leave the prices as they are and allow this one exception to the pricing methodology stated on page 5 of the Taufique statement, and gradually move the passthroughs towards 100 percent in subsequent price adjustments.

c. Not applicable.

RESPONSE OF ALTAF TAUFIQUE TO
PRESIDING OFFICER'S INFORMATION REQUEST NO. 6

27. Please provide Excel files to support the schedule of workshare discounts and avoided costs provided in Appendix A to witness Taufique's Statement.

RESPONSE:

Please see POIR6.Qu27.Response.xls, which is filed with this response electronically. Compared with the original version of Appendix A, this version reflects the following revisions:

In the Tab "Per. Bundle-Container Pricing", a row for FSS Scheme Pricing was added showing DFSS price as "$0.000", Bottom-up Cost as "$13.285" and pass-through as "0.0%". This added row is highlighted in yellow.

In the Tab Media Mail & Library Mail, the avoided costs for Basic Presort and 5-Digit Presort were transposed for both Media Mail and Library Mail. The new Media Mail and Library Mail Basic Presort avoided costs were both changed to "0.30" and the Media Mail and Library Mail 5-Digit avoided costs were both changed to "0.67". As a result, the calculated pass-throughs for Media Mail Basic Presort changed to "163.3%", Media Mail 5-Digit Presort changed to "58.2%", Library Mail Basic Presort changed to "156.7%", and Library Mail 5-Digit Presort changed to "55.2%". All changed values in this tab are highlighted in yellow.